



Alaskan Way Viaduct Replacement Project

U.S. Department of Transportation
Federal Highway Administration

WSDOT

City of Seattle

What is the Purpose and Need for the Alaskan Way Viaduct Replacement Project?

- Reduce the risk of catastrophic failure in an earthquake by providing a facility that meets current seismic safety standards.
- Improve traffic safety.
- Provide capacity for automobiles, freight and transit to efficiently move people and goods to and through downtown Seattle.
- Provide linkages to the regional transportation system and to and from downtown Seattle and the local street system.
- Avoid major disruption of traffic patterns due to loss of capacity on SR 99.
- Protect the integrity and viability of adjacent activities on the central waterfront and in downtown Seattle.





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Why are we here tonight?

To share results of our environmental analysis

An Environmental Impact Statement (EIS) describes a project and its potential environmental impacts. It ensures decision-makers and the public have sufficient information to make an informed decision about a project.

The 2010 Supplemental Draft EIS brings the bored tunnel alternative to the same level of analysis as previous viaduct replacement alternatives.

To gather public comments

We want to hear your thoughts on the bored tunnel alternative environmental review. The 2010 Supplemental Draft EIS public comment period is from Oct. 29 to Dec. 13, 2010.





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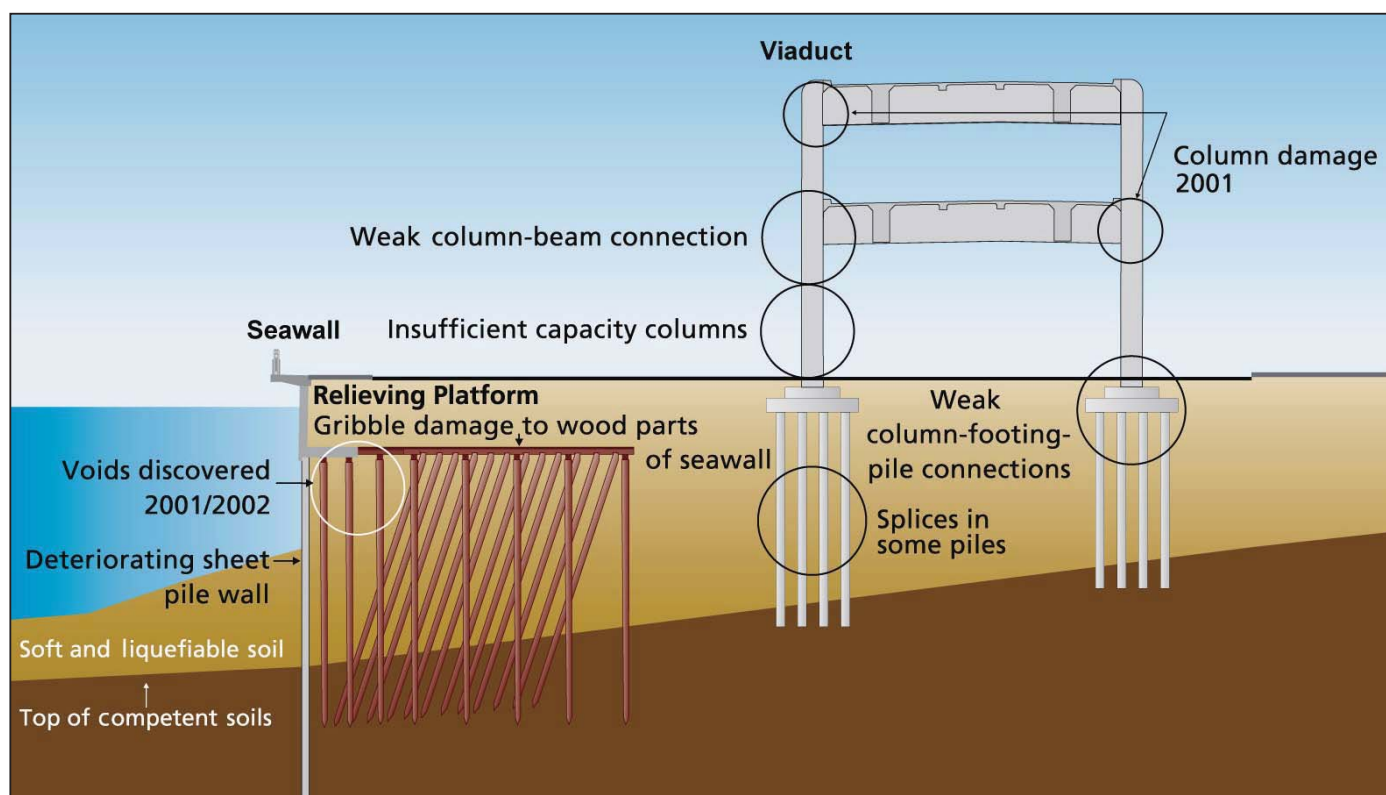
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Reduce Seismic Vulnerability

The viaduct is deteriorating and at risk of failure in an earthquake.

- The viaduct was constructed in the 1950s and conformed to the design standards of that time.
- The viaduct's existing foundations are embedded in liquefiable soil, and the structure is deteriorating.
- The replacement for SR 99 must meet current standards for earthquake resistance.



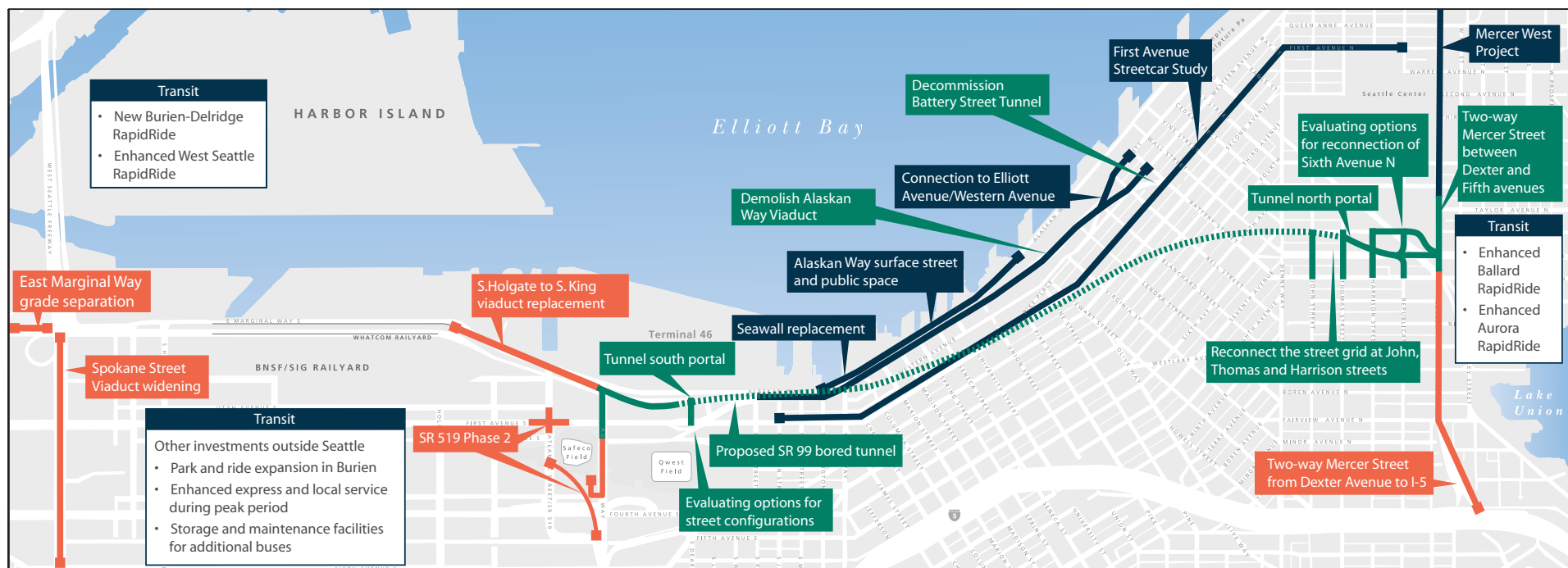


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Environmental review



Studied in 2010 Supplemental Draft EIS

Independent projects that complement the bored tunnel alternative

Projects to be completed before replacing the S. King Street to Battery Street Tunnel section of the viaduct



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What topics were analyzed in the 2010 Supplemental Draft EIS?

- Transportation
- Noise and vibration
- Land use / relocations
- Economics
- Visual quality
- Historic / cultural / archaeological resources
- Parks and recreation
- Public services and utilities
- Air quality
- Greenhouse gases
- Energy
- Surface water / groundwater
- Wildlife, fish and vegetation
- Hazardous materials
- Geology and soils
- Social / environmental justice





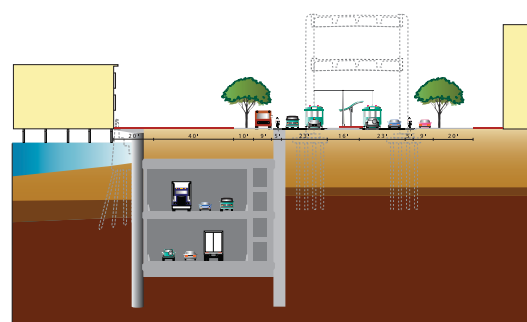
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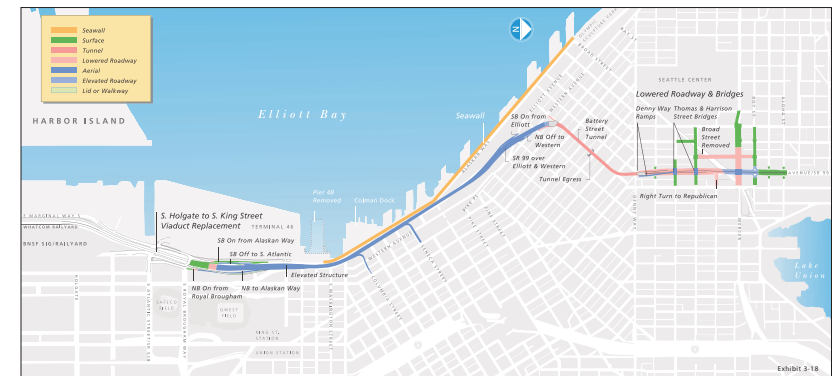
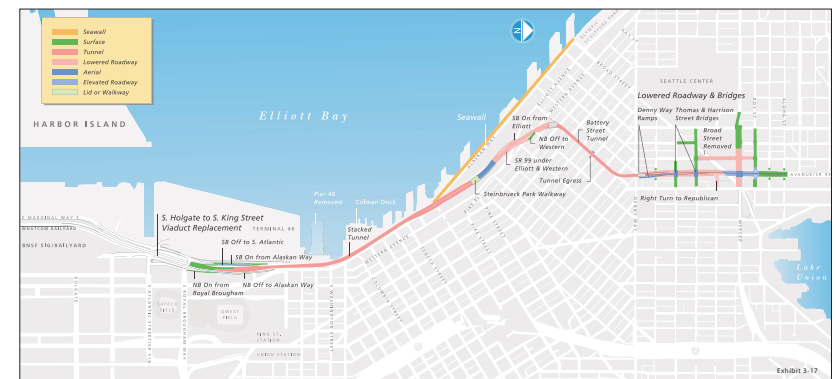
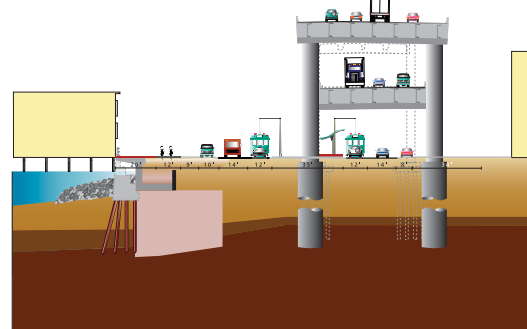
Previously studied alternatives

- 2004 Draft Environmental Impact Statement (DEIS) studied five alternatives.
- 2006 Supplemental DEIS studied cut-and-cover tunnel and elevated structure alternatives.

Cut-and-cover tunnel alternative



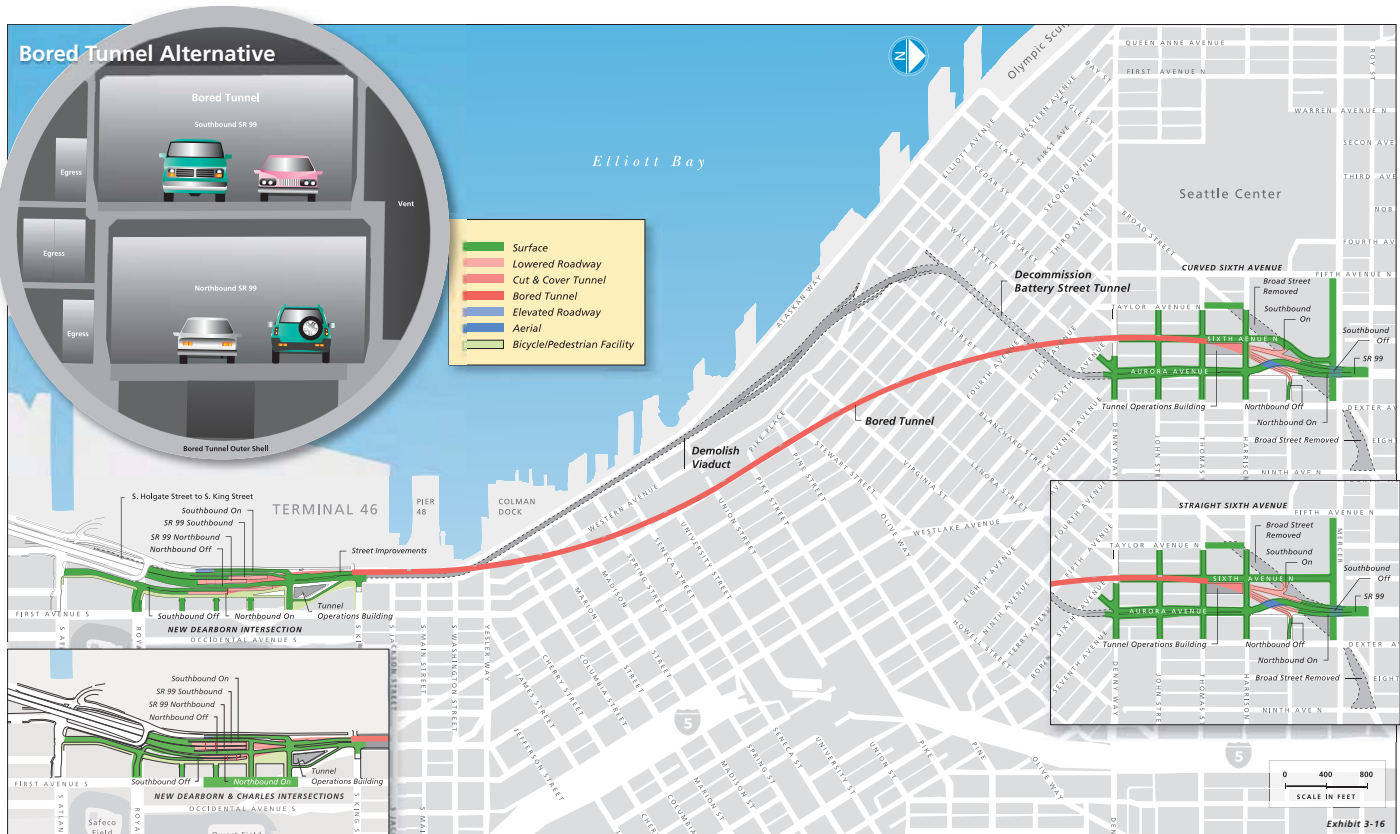
Elevated structure alternative



What is the bored tunnel alternative?

Identified as the preferred alternative, the bored tunnel alternative would:

- Move SR 99 into a tunnel beneath downtown Seattle.
- Reconnect the street grid at either end of the tunnel.
- Remove the viaduct and open up the waterfront for other public uses.
- Decommission the Battery Street Tunnel.



In the 2010 Supplemental Draft EIS, we examine two options for each of the tunnel portals. The south portal includes one- and two-intersection options. The north portal includes curved and straight Sixth Avenue N. options.



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Why was the bored tunnel identified as the preferred alternative?

- Minimizes construction disruption.
- Improves safety in an earthquake.
- Maintains SR 99 as a route through Seattle.
- Reconnects neighborhoods, provides opportunities for new pedestrian and bicycle connections.
- Allows for central waterfront improvements.









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What changes would drivers and transit see in the transportation system?

North of downtown:

- Full northbound and southbound SR 99 access near Harrison and Republican streets.
- New Sixth Avenue N. between Harrison and Mercer streets.
- Improved transit access and new east-west connections across Aurora Avenue at John, Thomas and Harrison streets.
- Two-way Mercer Street from Dexter Avenue N. to Fifth Avenue N.

South of downtown:

- Full northbound and southbound SR 99 access between S. Royal Brougham Way and S. King Street.

- New SR 99 off-ramp to Alaskan Way.
- New east-west connection(s) between First Avenue S. and Alaskan Way S.
- Peak hour, transit-only northbound SR 99 lane and off-ramp.
- Improved transit access to Pioneer Square.

Along central waterfront:

- Demolish existing Alaskan Way Viaduct.
- Under a separate environmental review process, the City of Seattle would lead central waterfront improvements including a new Alaskan Way and connection to Elliott and Western avenues.



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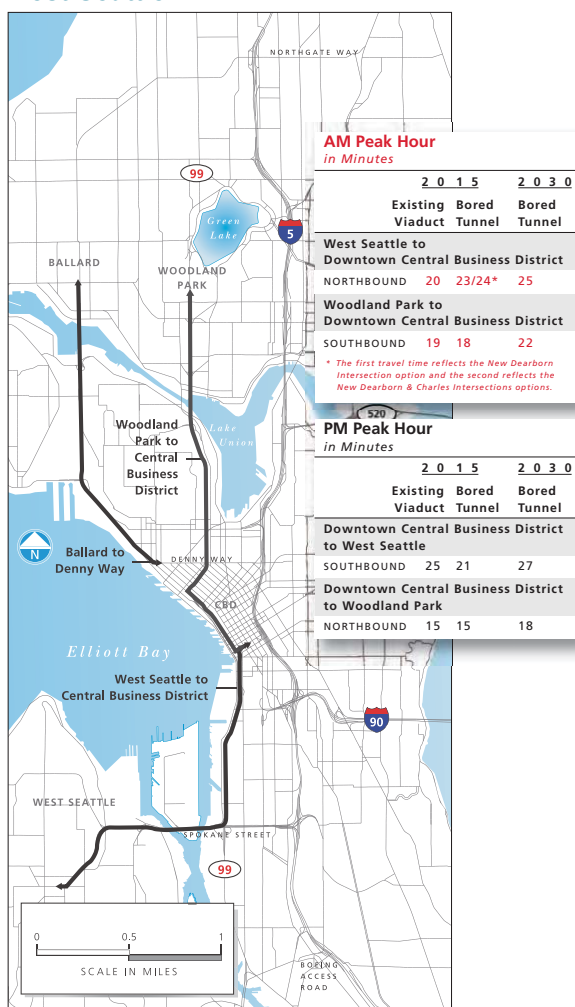
How would travel times change with a non-tolled bored tunnel?

Travel times without tolls:

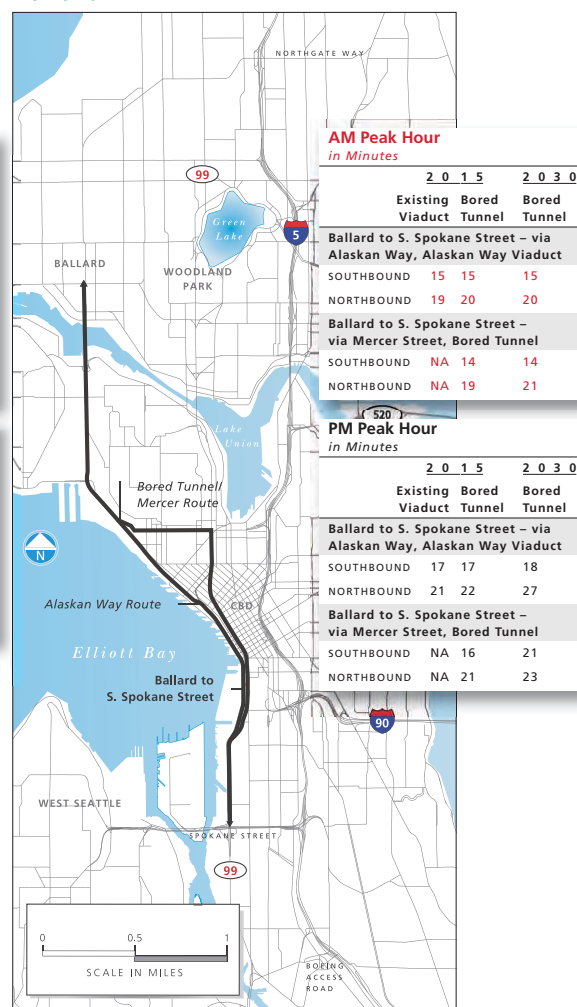
- The 2010 Supplemental Draft EIS analyzes travel times for a non-tolled and tolled bored tunnel.
- Travel times generally remain the same as they would with the existing viaduct.

Bored tunnel alternative travel time comparison

West Seattle



Ballard





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How would travel times and volumes change with a tolled bored tunnel?

How was tolling studied?

- The EIS analyzes the bored tunnel using the same tolling scenarios included in the 2010 tolling report submitted to the Legislature.
- Modeling shows tolling the bored tunnel could result in undesirable traffic levels on downtown streets and Alaskan Way.
- Tolling the cut-and-cover tunnel or elevated structure alternatives would have similar results as tolling the bored tunnel.

Why was tolling studied?

- The Washington State Legislature directed WSDOT to study tolling the bored tunnel to raise \$400 million as part of project funding.

SR 99 volumes

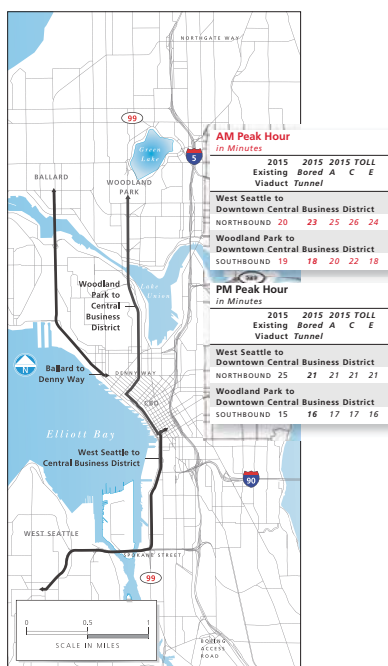
2015 Bored tunnel	86,600
2015 Bored tunnel toll scenario A	46,700
2030 Bored tunnel	93,900
2030 Bored tunnel toll scenario A	61,300

Travel times with a tolled bored tunnel:

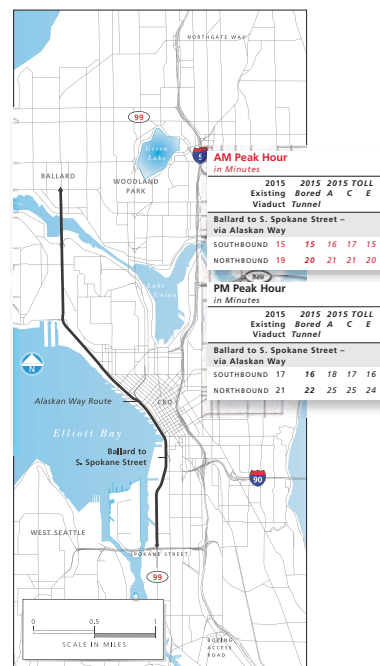
- Travel times could be 3 to 4 minutes longer for West Seattle to downtown and Woodland Park to downtown trips.
- Travel times could be 1 to 3 minutes longer for trips using surface Alaskan Way.

2015 Travel time comparison with toll scenarios

West Seattle



Ballard





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Summary of effects and benefits

Views:

- Enhances views from neighborhoods including downtown, Pioneer Square and Belltown.
- The bored tunnel would not provide the same view as the existing viaduct.

Noise:

- Decreases substantially along the waterfront.
- Slight increase near north portal.

Water quality:

- Provides treatment where runoff is currently untreated to improve water quality.

Air quality:

- Meets National Ambient Air Quality Standards.

Greenhouse gas emissions:

- Slightly higher levels anticipated due to future growth and power needed to operate tunnel systems.

Parking

- Permanently removes approximately 570 parking spaces from the north and south portal areas.

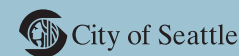
Viaduct removal:

- Protects public safety by removing seismically vulnerable viaduct.
- Opens up at least nine acres of open space.



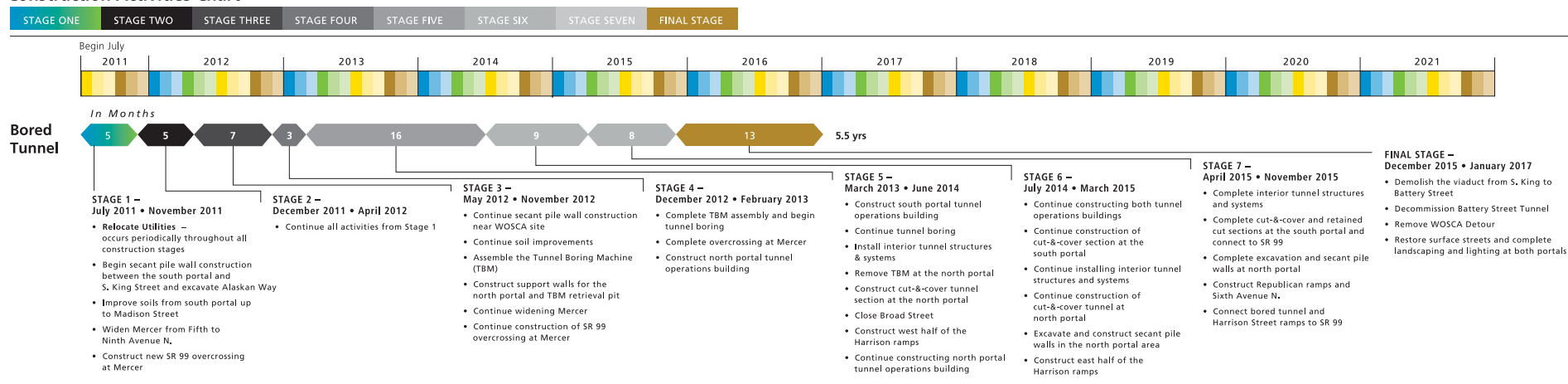


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How would the bored tunnel be built?

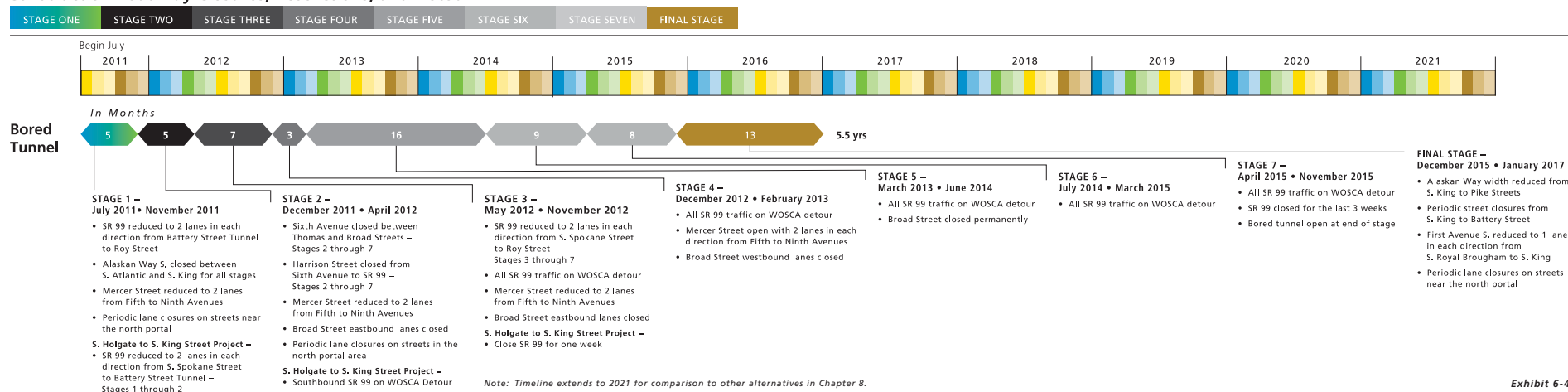
Construction Activities Chart



Note: Timeline extends to 2021 for comparison to other alternatives in Chapter 8.

Exhibit 6-1

Construction Roadway Closures, Restrictions, and Detour



Note: Timeline extends to 2021 for comparison to other alternatives in Chapter 8.

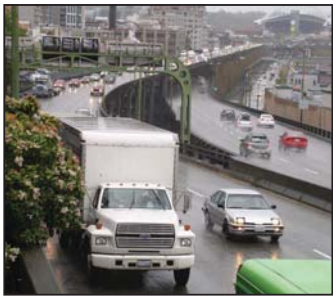
Exhibit 6-4



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How would traffic be affected during bored tunnel construction?



Freight

- May be affected by lane closures / reductions.
- Additional construction vehicles on routes used for hauling construction materials and spoils from south portal area.



Transit

- Transit-only lane on northbound SR 99 would help keep transit moving.



Bicycles and pedestrians

- Would be routed safely around construction zones.

Parking

- Temporarily removes parking spaces.
- \$30 million from State for mitigation during construction.

Ferry traffic

- Re-routes around local street closures.
- Marion Street pedestrian bridge remains operational until viaduct demolition.

Event traffic

- Some delays due to local street closures.
- Signage and signal timing critical to keeping traffic moving.

General purpose traffic

- Traffic flow would be close to capacity during construction and more likely to experience increased delay and congestion following a disruption.



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How would bored tunnel alternative construction affect parking?

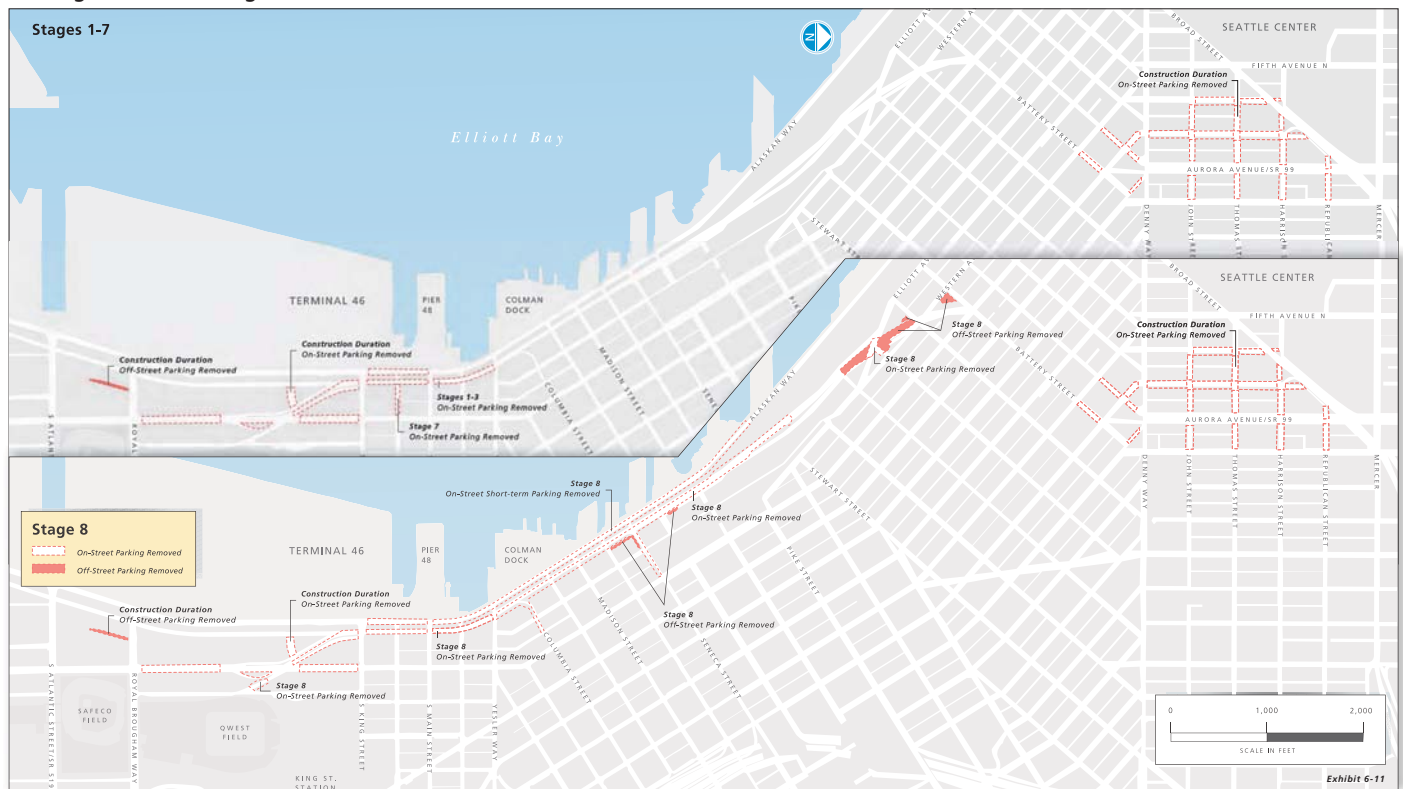
Exhibit 6-9
Construction Parking Effects During Stages 1 Through 7

	ON-STREET SPACES				Total Spaces
	Short-Term	Long-Term	Sub-Total	Off-Street Spaces	
South Portal Area	180	50	230	50	280
Central	70 – 150	10	80 – 160	0	80 – 160
North Portal Area	140	230	370	0	370
Total	390 – 470	290	680 – 760	50	730 – 810

Exhibit 6-10
Construction Parking Effects During Stage 8

	ON-STREET SPACES				Total Spaces
	Short-Term	Long-Term	Sub-Total	Off-Street Spaces	
South Portal Area	180	50	230	50	280
Central	540 – 550	10	550 – 560	Up to 190	Up to 750
North Portal Area	140	230	370	0	370
Total	Up to 870	Up to 290	Up to 1,160	Up to 240	Up to 1,400

Parking Affected During Construction





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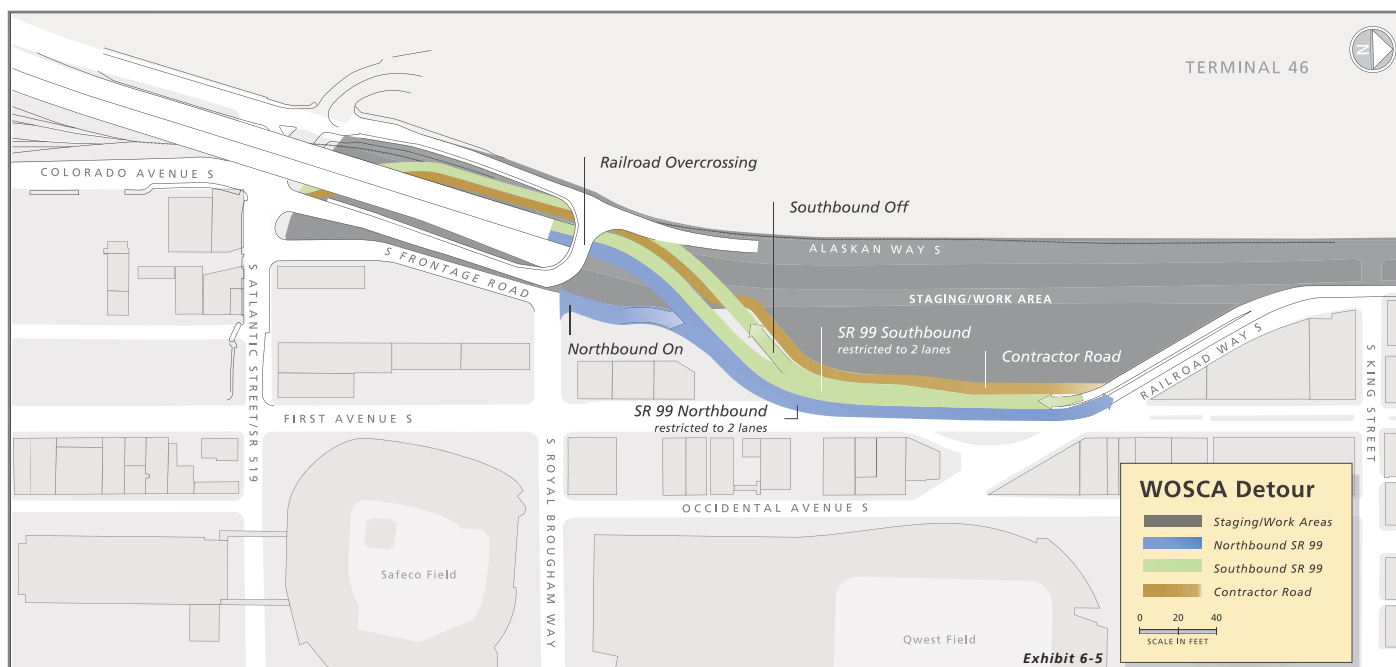
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How would bored tunnel construction affect the surrounding area?

- SR 99 remains open during construction with detour near stadiums.
- Three-week SR 99 closure required at the end of construction to connect bored tunnel to SR 99.
- Local street closures during portal construction.
- Tunnel boring activities 24-hours per day, seven days a week.
- Additional noise and activities near portal areas.



Tunnel boring machine



Proposed detour route



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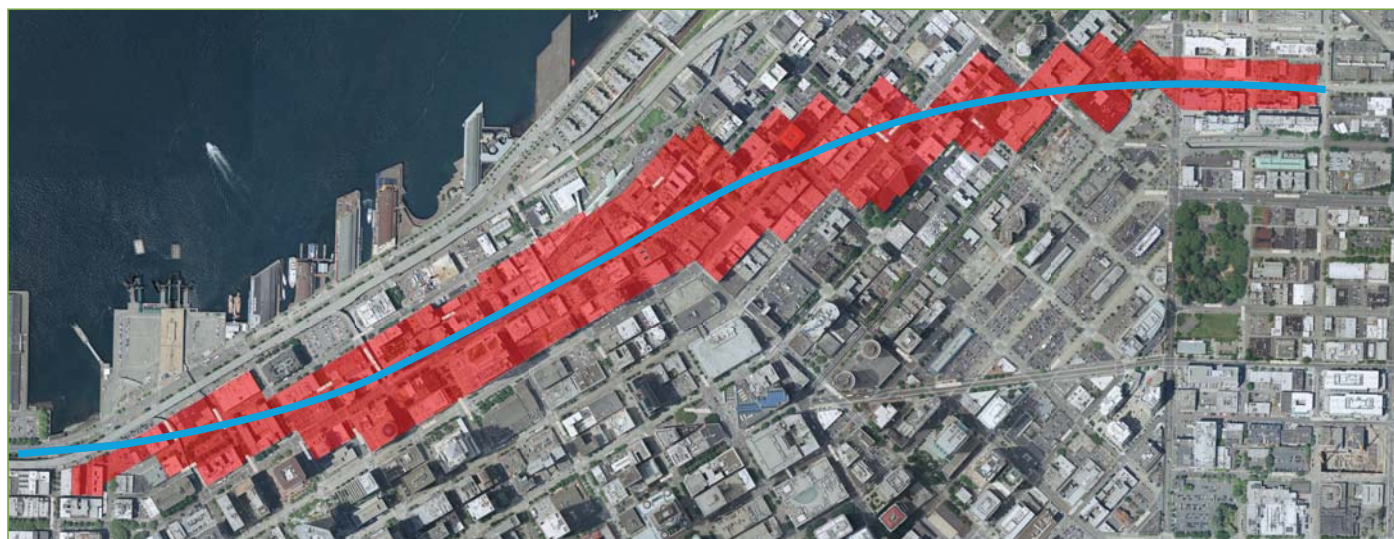
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Keeping buildings safe during bored tunnel construction

- Examined buildings along tunnel route to determine necessary mitigation and monitoring.
- Minimal settlement expected due to pre-construction mitigation measures.
- WSDOT will take an active role in monitoring buildings during and after construction.
- Design-build contract sets requirements for mitigation measures:
 - Vibration monitoring and control.
 - Ground improvement.
 - Settlement mitigation for buildings, other structures and utilities.
 - Construction monitoring program.



Areas in red indicate where monitoring would take place during bored tunnel construction.



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Historic and archaeological resources

In conjunction with regulatory agencies, WSDOT has identified historic and archaeological resources within the project area. WSDOT has determined how these resources would be affected by the project and how to mitigate any adverse effects.

Historic and archaeological resources adversely affected by the project:

- Alaskan Way Viaduct
- Battery Street Tunnel
- Western Building
- Polson Building
- Dearborn South Tideland site within south portal area
- Seattle maintenance yard (potential resource) within north portal area

Potential mitigation measures:

- Foundation assessment and potential strengthening for Western and Polson buildings.

- If Western Building needs to be demolished, mitigation measures would be identified through consultation with all involved parties.
- Data recovery for archaeological sites.
- Website and other public education materials for viaduct demolition.
- Historic American Engineering Record documentation for viaduct demolition.



Western Building



Polson Building



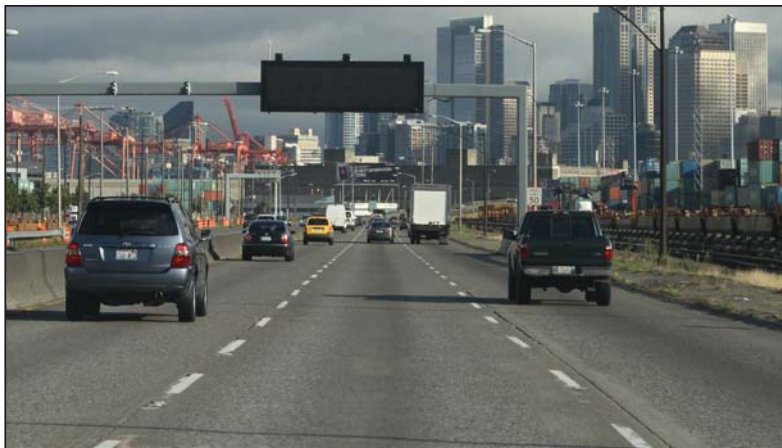
Archaeological work at South Dearborn Tideland site



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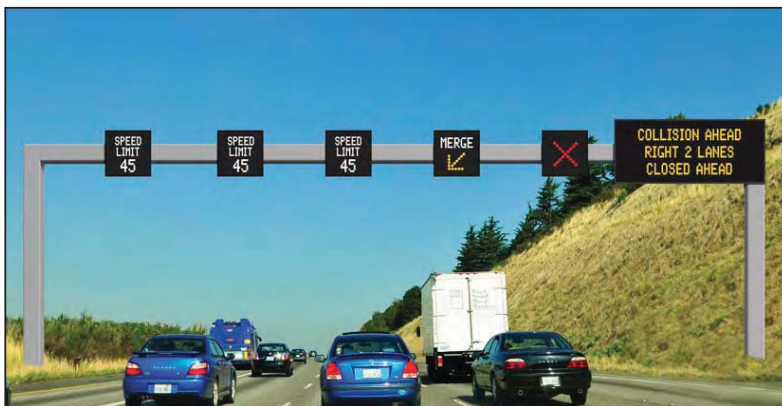
Keeping people and goods moving during construction



Real-time traffic information.



Roadway improvements.



Smarter Highways.



Added transit service.



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What are the next steps in the environmental review process?

2010			2011								
October	November	December	January	February	March	April	May	June	July	August	September
★ Oct. 29 – Publish Supplemental Draft EIS											
Oct. 29 to Dec. 13 – Conduct public comment period											
Nov. 16, 17, 18 – Hold public hearings											
						June 2011 – Publish Final EIS with responses to comments on draft EIS reports and updated project analysis ★					
						July 2011 – FHWA issues Record of Decision ★					
									Fall 2011 – Begin project permitting and construction ★		



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How can I comment?

You can view the 2010 Supplemental Draft EIS online at www.alaskanwayviaduct.org.

The public comment period is from **Oct. 29 to Dec. 13, 2010**. There are a variety of ways to submit comments tonight:



Fill out a comment form.



Speak to a court reporter.

Through Dec. 13, 2010:

- E-mail
awv2010SDEIScomments@wsdot.wa.gov
- Mail:
Angela Freudenstein
Alaskan Way Viaduct
Replacement Project
999 Third Ave., Suite 2424
Seattle, WA 98104

